

Amendment dated May 23, 2005  
Office Action dated 02/22/05

Application No. 10/021,917

### **REMARKS**

Claims 1-54 are pending. Claims 1-54 are rejected by this Office Action.

The Applicant is amending claims 1, 11, 24, 34, and 44 to include the features of claims 2, 12, 25, and 45, respectively, and to address the rejections under 35 U.S.C. § 101. Consequently, the Applicant is canceling claims 2, 12, 25, 35, and 45.

The Applicant acknowledges the withdrawal of the rejections under 35 U.S.C. § 112, second paragraph.

#### **Claim Rejections – 35 U.S.C. § 101**

Claims 1-33 are rejected by the Office Action for allegedly being directed to non-statutory subject matter under 35 U.S.C. 101.

The Office Action alleges that (Page 4, section 5.):

Although the recited process produces a useful, concrete, and tangible result, since the claimed invention, as a whole, is not within the technological arts as explained above, claims 1-33 are directed to non-statutory subject matter.

Regarding independent claims 1, 11, and 24, the Applicant has amended the claims to include "a memory" and "a processor that accesses the memory to retrieve computer-executable instructions." Consequently, claims 1, 11, and 24 are within the technological arts. Moreover, because claims 3-10, 13-23, and 26-33 ultimately depend from claims 1, 11, and 24, respectively, claims 3-10, 13-23, and 26-33 are also within the technological arts. Because claims 1, 3-10, 11, 13-23, 24, and 26-33 are within the technological arts and claim an invention that produces a useful, concrete, and tangible result, claims 1, 3-10, 11, 13-23, 24, and 26-33 are directed to statutory subject matter. Thus, the Applicant requests reconsideration of claims 1, 3-10, 11, 13-23, 24, and 26-33.

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### Claim Rejections – 35 U.S.C. § 102

**Claims 1-53 are rejected by the Office Action as being allegedly anticipated by “Integer Programming Models for Sales Resource Allocation”, March 1980 (Zoltners).**

Regarding claim 1, the Applicant has amended claim 1 to include the features of claim 2. Consequently, claim 1, as amended, includes the feature of “determining profit functions for the allocations from the profit data by: determining **demand distributions** for the allocations from the profit data; and determining each profit function from a corresponding **demand distribution**.” (Emphasis added.) Zoltners does not teach or even suggest this feature.

In reference to the rejection of claim 2, the Office alleges that:

Zoltners et al. discloses a method according to claim 1, wherein determining the profit functions includes: determining demand distributions for the allocations from the profit data and determining each profit function from a corresponding demand distribution (page 11; Model (M3) determines demand distributions (i.e., expected and minimum sales volume,  $s$  and  $S$ , respectively) associated with each resource allocation strategy).

Zoltners does disclose (Page 11, second paragraph. Emphasis added.):

Model (M3) has been presented as a resource allocation model. In addition, it can easily be modified to incorporate auxiliary constraints, such as minimum sales, profit, market share, and ROI targets. For example, a firm desiring to determine a profit maximizing allocation requiring at least a minimum sales volume could employ model (M3). In this example,  $c_{jk}$  would represent profit and the following constraint would be appended to the constraint set:

$$\sum_{j=1}^n \sum_{k \in S_j} s_{jk} x_{jk} \geq S$$

where

$s_{jk}$  is the **expected sales volume** associated with strategy  $S_j$  for sales entity  $j$ .

$S$  is the **minimum acceptance sales volume for the period**.

Zoltners merely discloses determining  $s_{jk}$ , which is the expected sales volume, and  $S$ , which is the minimum acceptance sales volume for the time period of the study. Consequently,  $s_{jk}$  is a statistical measure of the expected sales volume, and  $S$  is an assumed constant (not a statistical measure) that represents the minimum acceptance sales volume. While a statistical measure can be determined from a sample having an underlying distribution, one cannot determine the

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associated distribution (i.e., probability density function (PDF)) from the statistical measure. For example, different distributions (e.g., a normal distribution and a Poisson distribution) may have the same expected value. Consequently, Zoltners fails to disclose "determining demand distributions for the allocations from the profit data; and determining each profit function from a corresponding demand distribution."

The Office Action further alleges that (Page 7, section 7):

Claims 11-53 recite substantially similar limitations to claims 1-10 and 54 above. Therefore, claims 11-53 are rejected on the same basis as claims 1-10 and 54 above.

The Applicant has similarly amended independent claims 11, 24, 34, and 44. Claim 11 includes the feature of "determining profit functions for the physical allocations from the profit data by: determining demand distributions for the allocations from the profit data; and determining each profit function from a corresponding demand distribution." Claim 24 includes the feature of "determining profit functions for the economic allocations from the profit data by: determining demand distributions for the allocations from the profit data; and determining each profit function from a corresponding demand distribution." Also, claim 34 includes "a profit-model unit, the profit-model unit being connected to the data unit, and the profit-model unit including executable instructions for determining profit functions for the allocations from the profit data, wherein determining the profit functions includes: determining demand distributions for the allocations from the profit data; and determining each profit function from a corresponding demand distribution." Claim 44 includes executable instructions for "determining profit functions for the allocations from the profit data by: determining demand distributions for the allocations from the profit data; and determining each profit function from a corresponding demand distribution."

Because claims 3-10 and 54, 13-23, 26-33, 36-43, and 46-53 ultimately depend from claims 1, 11, 24, 34, and 44, respectively, claims 3-10 and 54, 13-23, 26-33, 36-43, and 46-53 are not anticipated for at least the above reasons.

Moreover, claims 3, 13, 26, 36, and 46 include the feature of "wherein each demand distribution includes a **Poisson model**." (Emphasis added.) Zoltners fails to disclose anything about a Poisson model.

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Claims 4, 14, 27, 37, and 47 include the feature "wherein each demand distribution includes a Markov model." Zoltners fails to disclose anything about a Markov model.

Claims 5, 15, 28, 38, and 48 include the feature "wherein each demand distribution includes a normal distribution model." Zoltners fails to disclose anything about a normal distribution model.

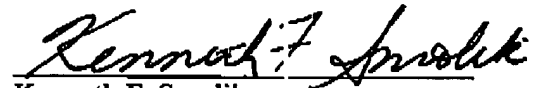
For at least the above reasons, the Applicant requests reconsideration of claims 1, 3-11, 13-24, 26-34, 36-44, and 46-54.

### CONCLUSION

All objections and rejections have been addressed. Hence, it is respectfully submitted that the present application is in condition for allowance, and a notice to that effect is earnestly solicited.

Respectfully submitted,

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